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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,991

10/05/2005

David C Huffman

235193

2405

23460 7590 07/17/2007

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CHICAGO, IL 60601-6731

EXAMINER

NGUYEN, DINH Q

ART UNIT

PAPER NUMBER

3752

MAIL DATE

DELIVERY MODE

07/17/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/530,991

Applicant(s)

HUFFMAN, DAVID C

Examiner

Dinh Q. Nguyen

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 26 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings were received on April 26, 2007. These drawings are approved and entered.

### ***Claim Rejections - 35 USC § 112***

2. Claims 6-8, 11, and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The newly added limitation "a downstream coplanar end face with no portion of the air cap extending downstream of the end face" is not disclosed in the specification as such.

3. Claims 6-8, 11, and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added limitation "a downstream coplanar end face with no portion of the air cap extending downstream of the end face" is not disclosed in the specification as such.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Bramsen as best understood by the examiner.

Bramsen discloses a spray device comprising: a body 1 having a liquid discharge passage 31, a spray nozzle assembly 11 affixed to the body 1, the spray nozzle assembly 11 including a liquid spray tip 2 for directing liquid from the liquid passage 31 in the body 1 into a predetermined spray pattern and an air cap 10, the liquid spray tip 2 including a forwardly extending nose portion that defines a liquid discharge orifice (not numbered), the nose extending through a central opening (not numbered) in the air cap 10 thereby defining an annular air discharge orifice (not numbered) that communicates with an air inlet, a pair of opposed angled fan atomizing fair passages (not numbered), a pair of V-shaped cut-out formed by a pair of wings (not numbered), and a valve needle 21 (see figure 3), wherein the air cap 10 having a downstream coplanar end face with no portion of the air cap extending downstream of the end face.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 5, 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalrymple or Kaneko or Bramsen.

Dalrymple or Kaneko or Bramsen teaches all the limitations of the claims except for the liquid discharge orifice arranged at least 2mm. or 1mm plus the diameter liquid discharge orifice downstream of the annular atomizing air discharge orifice. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have provided the nozzle of Dalrymple or Kaneko or Bramsen with the liquid discharge orifice arranged at least 2mm. or 1mm plus the diameter liquid discharge orifice downstream of the annular atomizing air discharge orifice, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Furthermore, it would have been an obvious matter of design choice to a person of ordinary skill in the art to provide the device of Dalrymple or Kaneko or Bramsen with the liquid discharge orifice arranged at least 2mm. or 1mm plus the diameter liquid discharge orifice downstream of the annular atomizing air discharge orifice. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either claimed dimensions or the Dalrymple or Kaneko dimensions. Therefore, it would have been an obvious matter of design choice to modify the device of Dalrymple or Kaneko or Bramsen to obtain the invention as specified in claims 1-3, 5, and 9-12.

### ***Response to Arguments***

8. Applicant's arguments filed 4/26/07 have been fully considered but they are not persuasive. Applicant amended claims 6-8 to overcome the rejection, but the newly

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added limitation "a downstream coplanar end face with no portion of the air cap extending downstream of the end face" is not properly disclosed in the specification.

9. Applicant's arguments with respect to claims 6-8 have been considered but are moot in view of the new ground(s) of rejection.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dinh Q. Nguyen whose telephone number is 571-272-4907. The examiner can normally be reached on Monday-Thursday 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Dinh Q Nguyen', with a long horizontal flourish extending to the right.

Dinh Q Nguyen  
Primary Examiner  
Art Unit 3752

dqn